

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-33

High Modulus, High-Strength, Structural, Rapid Curing Epoxy, Smooth-Paste Adhesive

### DESCRIPTION

Sikadur-33 is a 2-component, 100% solids, moisture-tolerant, high-modulus, high-strength, structural, smooth-paste epoxy adhesive.

### USES

As a structural adhesive for:

- Concrete elements
- Hard natural stone
- Ceramics, fibre cement
- Mortar, Bricks, Blocks, Masonry, render etc.
- Steel, Iron, Aluminium
- Wood
- Polyester, Epoxy

For concrete repairs

Interior, vertical and overhead repair of:

- Corners and edges
- Hole and void filling
- Joint arrises

Joint filling and crack sealing:

- Crack filling and sealing (non-moving)

Metalwork, carpentry:

- Fixing and fastening of handrails, railings, balustrades and supports
- Fixing of window and door frames

For use in the following:

- Concrete
- Hard natural stone
- Solid rock
- Hollow and solid masonry
- Steel
- Wood

### CHARACTERISTICS / ADVANTAGES

- Can be used on damp concrete
- Excellent adhesion to the substrate
- Non-sag, also overhead
- High load capacity
- Shrinkage-free hardening
- Styrene-free

### APPROVALS / CERTIFICATES

- Adhesive for structural bonding tested according to EN 1504-4, provided with the CE-mark
- Potable Water approved to AS4020:2018 - Testing of products for use in contact with drinking water.
- Qld Roads (TMR) Section 5. Registered and Conforming Products. Part 5.18 Epoxy paste for Bearing Installation

### PRODUCT INFORMATION

Composition	Epoxy resin
Packaging	2.7 kg kit (2 litres) 27 kg kit (20 litres)
Shelf life	12 months from date of production

<b>Storage conditions</b>	Store in original, unopened, sealed and undamaged packaging in dry conditions at temperatures between +10 °C and +30 °C. Protect from direct sunlight.
<b>Colour</b>	Component A: white Component B: grey Components A + B mixed: Concrete grey
<b>Density</b>	1.35 kg/l (component A+B mixed) (at +23 °C)

## TECHNICAL INFORMATION

<b>Compressive strength</b>	<b>Curing time</b>	<b>Curing temperature</b>	(AS 1478.2)	
		<b>+23 °C</b>		
	1 day	~30 N/mm <sup>2</sup>		
	7 days	~40 N/mm <sup>2</sup>		
	14 days	~43 N/mm <sup>2</sup>		
	14 days	~50 N/mm <sup>2</sup>	(EN 12190)	
<b>Tensile strength in flexure</b>	<b>Curing time</b>	<b>Curing temperature</b>	(EN 196)	
		<b>+23 °C</b>		
	14 days	~20 N/mm <sup>2</sup>		
<b>Tensile strength</b>	<b>Curing time</b>	<b>Curing temperature</b>	(DIN EN ISO 527-3)	
		<b>+23 °C</b>		
	14 days	~13 N/mm <sup>2</sup>		
<b>Tensile adhesion strength</b>	<b>Curing time</b>	<b>Substrate</b>	<b>Adhesion strength</b>	(EN 1542 / EN 4624)
	3 days	Dry concrete	>5 N/mm <sup>2</sup> *	
	3 days	Dry concrete	>5 N/mm <sup>2</sup> *	
	3 days	Blastcleaned steel	>10 N/mm <sup>2</sup>	
	3 days	Dry brick	>1.5 N/mm <sup>2</sup> **	
	*100% concrete failure **100% brick failure			
<b>Shrinkage</b>	Hardens without shrinkage			
<b>Coefficient of thermal expansion</b>	9.3 x 10 <sup>-5</sup> per °C (Temp. range +23 °C – +60 °C)		(EN 1770)	
<b>Glass transition temperature</b>	+49°C (7 days / +23°C)		(EN 12614)	

## APPLICATION INFORMATION

<b>Mixing ratio</b>	Component A : component B = 1 : 1 by volume
<b>Consumption</b>	~1.35 kg/m <sup>2</sup> per mm of thickness. This figure is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.
<b>Layer thickness</b>	0.5 mm min. / 10 mm max.
<b>Sag flow</b>	Non-sag, suitable for overhead applicaiton
<b>Ambient air temperature</b>	+10 °C min. / +35 °C max.
<b>Relative air humidity</b>	85% max. (at 25 °C)
<b>Dew point</b>	Beware of condensation. Substrate temperature during application must be at least 3 °C above dew point.
<b>Substrate temperature</b>	+10 °C min. / +35 °C max.

<b>Substrate moisture content</b>	Substrate must be dry or mat damp (no standing water)	
<b>Pot Life</b>	60 minutes (+23°C)	
<b>Open Time</b>	<b>Temperature</b>	<b>Open Time T<sub>gel</sub></b>
	+10 °C	210 minutes
	+20 °C	90 minutes
	+35 °C	45 minutes
Minimum cartridge temperature +10 °C		
<b>Curing time</b>	<b>Temperature</b>	<b>Curing Time T<sub>cur</sub></b>
	+10 °C	3 days*
	+20 °C	2 days*
	+35 °C	1 day*
*To achieve approx. 80% of the performance Minimum cartridge temperature +10 °C		

## BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## IMPORTANT CONSIDERATIONS

- Minimum substrate and ambient temperature 4°C.
- Do not thin. Addition of solvents will prevent proper cure.
- Material is a vapour barrier after cure.
- Not for sealing and cracks under hydrostatic pressure at the time of application.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

Mortar and concrete must be older than 28 days. Adequate substrate strength (concrete, masonry, natural stone) must always be confirmed.

### MIXING

Pre-mix each component. Proportion equal parts by volume of Component „B“ and Component „A“ into a clean pail. Mix thoroughly for 3 minutes with Sika paddle on low speed (400-600 rpm) drill until uniform in colour. Mix only the quantity that can be used within its potlife.

### APPLICATION METHOD / TOOLS

Apply Sikadur-33 to the prepared substrate by trowel or gloved hand. Ensure the material is worked well (scrubbed) into the surface, this is particularly important on damp surfaces. There should be no standing water on concrete surfaces.

If using Sikadur-33 as an adhesive, coat both adherents and press into place (on vertical and overhead surfaces temporary support must be provided). The adhesive layer should not be less than 2 mm.

### To seal injection ports and crack for injection grouting

– Place the neat mixed material over the cracks to be pressure-injected and around each injection port. Allow sufficient time to set before pressure-injecting. Use Sikadur-52 for the low-viscosity injection adhesive. Consult the Technical Data Sheet on this product for more information. Also contact Technical Services for additional information on pressure-injection grouting.

**To anchor bolts, dowels, pins** – Annular space around bolt should not exceed 3 mm, depth of embedment is typically 10-15 times the bolt diameter. Grout with neat Sikadur-33.

### CLEANING OF EQUIPMENT

Uncured material may be cleaned from application tools, etc. by using Sika Colma Cleaner (flammable solvent). Cured material can only be removed mechanically.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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**Product Data Sheet**

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